

## MEETING SUMMARY

Agricultural Best Management Practices (AgBMP) Technical Workgroup

February 6, 2007; 10:00 a.m., Room 145

Arizona Department of Environmental Quality

1110 West Washington Street, Phoenix, Arizona

Attendees (Workgroup members are starred): Scott DiBiase, Randy Sedlacek\*, Wienke Tax\*, Emily Bonanni, Jeannette Fish\*, Andrea Martin, Cathy Arthur, Lindy Bauer, Joe Sigg, Steve Peplau\*, Rick Ladra\*, Corky Martinkovic, Dena Konopka, Kris Graham Chavez\*, Rick Lavis\*, Kevin Rogers\*, Lisa Tomczak, Nancy Wrona\*, Ira Domskey

Kevin Rogers called the meeting to order. Mr. Rogers began the meeting with a discussion of the comparison analysis of San Joaquin Valley Conservation Management Practices (CMPs) and Maricopa County Best Management Practices (BMPs). Randy Sedlacek, Arizona Department of Environmental Quality (ADEQ) Assessment Section, presented an overview of the comparison analysis. Mr. Sedlacek said the comparison looked at potential PM<sub>10</sub> emissions reductions from implementation of Maricopa County agricultural BMPs and San Joaquin Valley CMPs. He pointed out that page eight of the handout provides a ranking of the BMPs and CMPs. Mr. Sedlacek also pointed out this analysis is not an emissions inventory. The analysis was based on the assumption that each measure is applied to all appropriate land areas, which results in a high estimate. Mr. Sedlacek said that the measure rank is more meaningful than the estimated emissions reductions associated with each measure. Mr. Rogers asked if the analysis took into account the wind barrier and how many high wind days occurred in order to make sure the coefficient made sense. Mr. Sedlacek said the analysis combined control measures for both high wind and stagnant air days. Wienke Tax, Environmental Protection Agency (EPA) Region IX, asked if the graph represented both San Joaquin Valley and Maricopa County. Mr. Sedlacek said that it is a blending of San Joaquin Valley and Maricopa County. Mr. Rogers asked what year was used for the acreage. Mr. Sedlacek said that the comparison used 2004 agricultural statistics. Mr. Rogers pointed out that he looked at the acreage makeup and saw that from 2004 to 2007 there is a significant shift from cotton to alfalfa and this may provide a reduction in emissions.

The next item discussed was cessation of night tillage during stagnant air days. A handout indicated that during the winter season of 2005 to 2006 (October 2005 to March 2006) approximately 41 exceedances of PM<sub>10</sub> emissions occurred on stagnant air days. Mr. Sedlacek said the table does not show the time frame during which the exceedances occurred and said ADEQ could look at the monitoring data and determine a time frame. Mr. Rogers said that it would help to know when the exceedances occur because that would narrow down the time frame to cease tilling activities [Action Item No. 1]. Cathy Arthur, Maricopa Association of Governments (MAG), said that a source attribution study showed peak emissions generally occur between 4:00 a.m. and 8:00 a.m. during stagnant air days. The peak builds up when the inversion sets in and peaks prior to the inversion dispersing. Jeanette Fish said that emissions come up again in the afternoon but not as high as the morning peak. Ms. Arthur said when the inversion occurs again in the evening any emissions and pollution occurring after sunset are trapped under the inversion.

Mr. Rogers said that there is a need to determine if there are enough stagnant air days to warrant cessation of tilling and the appropriate time frame to cease tilling. He asked if it would make sense to set it from 12:00 a.m. to 12:00 p.m., or just during night hours. Mr. Sedlacek said that ADEQ forecasts high winds and/or stagnant conditions and those forecasts are provided to the public through a notification system. Ms. Fish said the Department of Agriculture participates in the notification system.

Rick Lavis asked if this notification system would reach all of the growers. Mr. Sedlacek said that television weather staff will say during a newscast if there is a high pollution advisory. Corky Martinkovic, ADEQ Air Quality Planning, said they are currently discussing a system to notify asthmatics of high pollution advisory days. She said that a flag system using different colored flags for different conditions, similar to one used in San Joaquin Valley, could be used in the nonattainment area. Mr. Ladra asked how soon a notice is given. Mr. Sedlacek said the forecasts are given three days in advance. Mr. Lavis asked if a list with different options for notification systems starting with these used in Arizona and San Joaquin Valley could be made. [Action Item No. 2]

Mr. Rogers said that if cessation of night tilling during stagnant air days is added as a BMP, notification needs to get to the growers choosing that BMP. Dena Konopka, Maricopa County Air Quality Department, asked if cessation of tilling during stagnant air conditions could be considered mandatory on high pollution advisory/stagnant days instead as an optional BMP. Mr. Rogers said that it should be determined how many farmers operate at night. The addition of a cessation of night tilling as a BMP would also depend on the definition of night tilling. Ms. Fish said that the definition needs to clarify night tilling versus night farming. Mr. Lavis commented that the introduction of prohibitions and mandatory requirements into a voluntary program could create problems that may lead to additional prohibitions or requirements.

Mr. Rogers said the data shows a high number of stagnant air days and cessation of night tilling is worthy of consideration as a additional BMP. Diane Arnst, ADEQ Air Quality Planning, asked how the cessation of night tilling would be credited towards the five percent reduction. Ms. Tax said that it is difficult to calculate emissions reductions from voluntary measures.

Mr. Rogers asked if there was a consensus to clarify the measure as tillage instead of farming activities and add it as a BMP. The question remains as to the time frame in order to make it a viable BMP. Mr. Rogers said that since farmers operate in shifts it may make sense to use shift hours. Ms. Fish commented that the inversion appears to begin breaking up around 9:00 a.m. and we may not want to lift it until 9:00 a.m. or later. Mr. Sedlacek stated that ideally the time frame should be for the entire inversion; however, if that is not feasible then 12:00 a.m. to 9:00 a.m. may work. If peak exceedances commonly occur around 4:00 a.m. then farmers may not compound the problem if they operate until midnight and then cease tilling before the peak hours.

Mr. Ladra asked what MAG suggests as an acceptable time frame. Lindy Bauer, MAG, said that it may help to determine how quickly particles deposit. Ms. Arthur said they would need to determine the particle size distribution from agricultural tilling. Mr. Rogers said that the type of

activity may influence the distribution of different sized particles.

Mr. Rogers said that cessation of night tilling during stagnant air conditions should be recommended as an additional BMP and suggested a time frame of 12:00 a.m. to 9:00 a.m. He added that the final decision for the time frame should be left to the AgBMP Committee.

Mr. Lavis moved to add cessation of night tillage, with a recommended time frame of 12:00 a.m. to 9:00 a.m., as a BMP for the Committee's consideration. Ms. Fish seconded; motion passed.

Ms. Fish asked whether the BMP should apply across all agricultural fields in the nonattainment area or just in the area prone to problems from stagnation. Mr. Rogers said there are no "sub-areas" in the BMP program, and because of the topology of the Valley all emissions contribute because all the air mass mixes.

The next agenda item discussed was the number of required BMPs per category. Ms. Tax commented that she is following the lawsuit in the San Joaquin Valley regarding the CMP program. The issue in San Joaquin is not about program specifics but that the BMPs have to be Best Available Control Measures (BACMs). Ms. Tax said the Workgroup should be careful to add BMPs with higher control efficiencies than the ones currently on the list to qualify as BACMs. Ms. Tax added that an additional category or an additional BMP per category would strengthen the rule. Ms. Fish said that many farmers currently use more than one BMP per category. Ms. Tax commented that additional BMPs are not always reported and, therefore, it is difficult to get credit for using additional BMPs. Mr. Rogers said that the use of an additional BMP per category would show that agriculture is contributing to needed emission reductions. Mr. Rogers said that the most difficult category to add a BMP to is non-cropland. It is especially problematic if a farmer does not have the ability to restrict access to roads. If farmers are required to use an additional BMP they may lose the economic feasibility associated with BMPs.

Mr. Lavis moved that the Workgroup recommend to the Committee changing the requirement from one BMP per category to two BMPs per category. Seconded by Mr. Sigg; motion passed. Mr. Rogers suggested that Committee members notify their stakeholders that a requirement of two BMPs per category will be discussed by the Committee. [Action Item No. 3]

At this time Mr. Rogers made the official Call to the Public. Mr. Lavis requested a map showing the nonattainment area boundaries, Area A boundaries, township and range, and major roadways.

Mr. Sigg commented on Senate Bill 1552. This bill would prohibit tilling in Area A on days that ADEQ issues a high pollution advisory. Ms. Fish said the bill also mandates the BMP program expand to Area A. Ms. Bauer said that MAG appreciates the work conducted by the Committee and the BMP process, but Mr. Sigg said that a lot of work has gone into the development of the AgBMP program and to have Senate Bill 1552 introduced without input from the Committee appears to overlook this historical effort.

Ms. Tax commented that EPA has received funding to look at control efficiencies for agricultural BMPs. EPA would appreciate any input from Maricopa County in this research if possible.

Ms. Konopka commented that it may be helpful to have further discussion with the Committee regarding the reporting of BMPs. This would help to accurately estimate emissions reductions in order to enable agriculture to take specific credit for BMPs. Ms. Konopka also provided a comparison of the San Joaquin Valley Rule 4550 to Maricopa County Rule R18-2-611, highlighting the differences in reporting requirements. Andrea Martin, Department of Agriculture, reminded the Workgroup that the Department of Agriculture requires a growers permit, so a farmer could file a BMP plan when they apply for the permit. The information could be kept at the Department of Agriculture.

Mr. Ladra asked about the difference between the San Joaquin rule and Maricopa County rule regarding the definition of the size of a farm operation. Ms. Konopka clarified that the San Joaquin Valley requirement is for agricultural operations that are greater than 100 acres. Mr. Rogers said that since many of the fields in the nonattainment area in Maricopa County are small, a similar requirement here would exempt many farmers from the BMP program. In this respect, the Maricopa County rule is more restrictive than San Joaquin Valley's rule.

Mr. Rogers said that many farmers may be reluctant to report the information because there could be times when they cannot use more than one BMP. Mr. Lavis commented that farmers may also be reluctant to report because they do not want the information to become publicly available and risk outside parties gaining this information for other purposes. It was suggested that the comparison of the San Joaquin rule and Maricopa County rule be forwarded to the Committee. [Action Item No. 4]

## **Summary of Action Items**

### Motions:

- 1) Recommendation that the Committee add cessation of night tilling as a BMP, with the suggestion of 12:00 a.m. to 9:00 a.m. time frame.
- 2) Recommendation that the Committee add a minimum of two BMPs per category.

### Action items:

- 1) Determine the time frame for exceedances at continuous monitors [ADEQ].
- 2) Develop a list of options for notification systems for weather conditions [ADEQ].
- 3) Ask Committee members to speak with their stakeholders that a minimum of two BMPs per category is under consideration by the Committee [ADEQ].
- 4) Email the comparison of San Joaquin Rule 4550 and Maricopa County Rule R18-2-611 to the Technical Workgroup and the Committee.

Mr. Rogers adjourned the meeting at 11:30 a.m.